

and it might, on this account, be anticipated that its fauna would present a larger representation of continental types than the more northern islands of the series. That this is the case is shown by the present very limited list, which includes two Brazilian species of the genera *Amiva* and *Drymobius*. None of the species of the Dominica list were found on Tobago by Mr. Ober.

VIII. NORTHERN BOLIVIA, ORTON.

Among the collections sent by Prof. Orton to Philadelphia before his departure for the Beni River, was a collection of reptiles from La Paz, on the eastern slope of the Andes, in Western Bolivia. This city, as is well known, is situated a short distance above the forest line, and enjoys a temperate climate.

In packing, some specimens from Puno, on Lake Titicaca, were mixed with those from La Paz. As reptiles are rare at that elevated locality it is probable that most of the species enumerated were derived from the latter place.

Bufo spinulosus Wiegman.

Oxyrrhopus doliatus D. and B.

Aporophis tenuis Tsch.

Bothrops microphthalmus Cope, Journal Academy Philadelphia, 1875, p. 182.

Scales in twenty-one longitudinal rows, all carinate excepting the first row, the keels not unusually prominent, and not reaching the apex of the scale. The second labial scute bounds the maxillary fossa in front, but it is partly cut off by suture on both sides.

In the above characters the single specimen of the collection differs from the type. The latter is large, the present individual is small, and the less development of the keels of the scales is perhaps due to immaturity. The scales on the top of the head are larger than in other species of the genus but not so large as in the type. The superciliaries are wide as in it, and there are only seven superior labials. The color of the inferior surface is, anteriorly, mixed black and gray, posteriorly black.

Fossil (?) Forms in the Quartzose Rocks of the Lower Susquehanna. By Persifer Frazer, Jr. With a plate.

(Read before the American Philosophical Society, April 4, 1879.)

The forms which accompany and illustrate this paper are found in a hard quartzose greenish rock, difficult to name, which forms part of the left border line of the great river in Cecil County, Maryland, just below the Pennsylvania line.

By a mistake (not the fault of the writer) in the title, the figures are given as from Lancaster county, Pennsylvania. In reality the discoverer of these curious and as yet unexplained phenomena, Dr. C. H. Stubbs, of Fulton

Township, Lancaster Co., found them all in one locality, viz: Frazer's Point, a headland in the river about half a mile below Mason and Dixon's line.

Two of the original specimens have been submitted in turn to Prof. Whitfield, of the New York Museum; Prof. Jas. Hall, State Geologist of New York, and Dr. Joseph Leidy, of this city.

Letters from the first two are found below. Dr. Leidy expressed no definite view.

In the face of the inability of such eminent authorities to determine anything in regard to these objects, I feel reticence to be but the part of sound wisdom. I will only add that these have been very faithfully and accurately delineated of actual size by the artists, Mr. Faber and Mr. Tuthe. (The latter transferred all the drawings to stone, besides making the original sketch of No. 1.) The horizon whence these were taken is believed to have been that immediately under the Potsdam, but in no case can be ascribed to one more recent than the latter formation.

A partial analysis by the undersigned of the very thin film out of which one of these forms, not here represented, was made, here follows. Amount obtained for analysis 0.0562 Gram :

Moisture.....	2.13
Silica.....	57.11
Iron Sesquioxide.....	4.93
Alumina.....	7.52
Lime.....	5.93
Magnesia.....	2.88
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Sum.....	80.50
Undetermined and loss.....	19.50
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Total.....	100.00

The following are the letters from Prof. Whitfield and Prof. Hall, referred to above:

"AMERICAN MUSEUM OF NATURAL HISTORY,
Central Park, 77th street and 8th Avenue,
NEW YORK, OCT. 9, 1878.

"Dear Sir:

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"The articles sent are *not* fossils, nor are they *organic*—but present every appearance of sandstone pebbles of very fine texture. The annulations on the *Orthoceras*-like specimen" (Fig. 5) "are lines of fracture, and pass across the rock on each side, showing conclusively their nature."

* * * * *

"In future I hope you may have better success than in the present instance.

"I remain yours very truly, R. P. WHITFIELD."

"NEW YORK STATE MUSEUM OF NATURAL HISTORY,
ALBANY.

Fig. 5.

"The enclosed material lies, *apparently*, obliquely to the lines of bedding, and the influence of these lines appears to affect or mark the enclosed

piece. It is impossible to say that it is a fossil, nor could a fossil, unless previously silicified, be preserved in a rock so highly metamorphosed.

"I *do not* believe it to have been a pebble. The extremely elongate form and elliptical section would in my opinion preclude that view of the matter.

"Should you ever obtain specimens of which you could spare a thin slice, it would be the best method of determining the nature of the material.

Fig. 4.

"The enclosed material lies apparently in the plane of the bedding or lamination of the enclosing rock. The substance is too thin to give an idea of the full original form, but from its outline I infer that it has been similar to the other specimen" (Fig. 5). "The outline is, in *my opinion*, quite too symmetrical for a pebble, and, while we have no evidence of its organic character, it is not easy to give any satisfactory explanation of its origin.

"The specimens are extremely interesting and others should be sought for. J. HALL."

Since the receipt of the above letters the other specimens have been sent to the writer by Dr. Stubbs.

On Pyrophyllite from Schuylkill County, Pennsylvania. By F. A. Genth.

(Read before the American Philosophical Society, July 18, 1879.)

One of the most interesting varieties of pyrophyllite is that from the coal slates of the "North Mahanoy Colliery" (old Silliman Colliery) near Mahanoy City, Schuylkill county, Pa.

It had been mistaken for damourite, until, by chemical analysis, I established its true character.

I am indebted to Mr. Eli S. Reinhold, of Mahanoy City, for specimens and for the following information with reference to its occurrence.

In the bed, known as "Buck Mountain," it is usually found in horizontal seams, parallel with the coal beds, although it occurs at times in irregular seams in other directions. Thus far it has not been found in any of the other beds of the same mine, and only this mine has furnished it, although the bed in which it occurs is worked in other mines. It also is observed as marking or constituting the plant impressions on the coal slates at this locality.

It is found in thin seams of a delicate fibrous structure. At first glance much resembling the serpentine-variety "chrysotile." It seems that this pyrophyllite has been filling up cavities and cracks in the coal slate, and the exceedingly delicate impressions left by the coal plants in the slate are, after their decay, filled up with pyrophyllite material. Then, it is often not thicker than the finest tissue paper, but still shows, when magnified, the fibrous appearance. In larger cracks it seems to have crystallized from above and from below, and the two seams, thus formed, are mostly separated by a thin layer of pyrite in minute crystalline masses, which leave the impressions of their crystals upon the pyrophyllite. Frequently the fibrous pyrophyllite, as well as the pyrite, are coated with a very thin layer, not thicker than the finest tissue paper, of a *scaly* variety of pyro-